C/M&CG

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TELEPHONE AND TERMINAL TEAM

ORGANIZATION RECOMMENDATIONS

May 20, 1985

INTRODUCTION

We were asked to recommend specific organizational changes that, in our opinion, would help 1) improve user relations and subsequently the user's image of OIT, and 2) correct the fragmentation that currently exists in the installation and maintenance functions.

The recommended organizational changes will improve our ability to:

- o Install equipment in a more organized and scheduled fashion.
- o Provide immediate and accurate trouble information to users and a single focal point for user information.
- o Improve internal and external OIT coordination and communication.
- o Provide all OIT components with a clear direction and focus on the future of the computer and communications network.

TELECOMMUNICATIONS SUPPORT

The Maintenance, Installation, Survey, and Requirements collection and evaluation functions should be combined and brought under the control of one manager. These functions currently exist in separate Divisions, Branches, and Sections of DNG and PSG. Combining these functions will improve communications, provide a single focus on office priorities, and coordinate a more efficient use of office resources.

NETWORK CONTROL CENTER

As part of the Telecommunications Support function we recommend that the Technical Control Section (DNG/HFD) and the Technical Control Watch Teams (DNG/HFD) be combined with the Trouble Desks from DNG/MFD and C&AG/IMD to form the Network Control Center. The NCC function should also be provided with additional personnel with a computer and/or communications background to ensure adequate staffing.

The chart illustrates in greater detail the components that make up the Telecommunications Support function. The chart also suggests an overall structure for all Operations, Telecommunications, and User Support functions. The creation of a Telecommunications Support function as described here will improve service. However, a re-structuring of the entire operations, user interface, and maintenance functions would foster greater interaction and provide a clearer, more directed focus.

If managed properly, the new Telecommunications Support function as described above will improve Terminal and Telephone installation and maintenance.

USER SUPPORT

This function is a vital part of the operational environment. It must remain separate and distinct if it is to maintain the objectivity that is required of an internal organization that represents the views and concerns of the user community. This function must serve as the central communications point to inform and assist OIT as well as the user community. The proposed organizational change (attached chart) should eliminate the inter-office communication and coordination problems.

ARCHITECT

The term "Architect" is not a popular one, but it clearly describes what is needed in our ever-changing and constantly growing environment. To ensure that OIT will have the ability to provide for the Agency's growing communications and computer needs, we must have a qualified person or staff that focuses the majority of its attention and energy on the future. This function must exist at the Office level, yet stay in constant contact with all of the OIT line organizations. It is essential that this office serves as an advisor to the line organizations and that it maintains an awareness of the existing component problems, needs, and plans. The importance of this activity is to ensure that

long range planning for tomorrow is done with a clear understanding of where the organization is today.

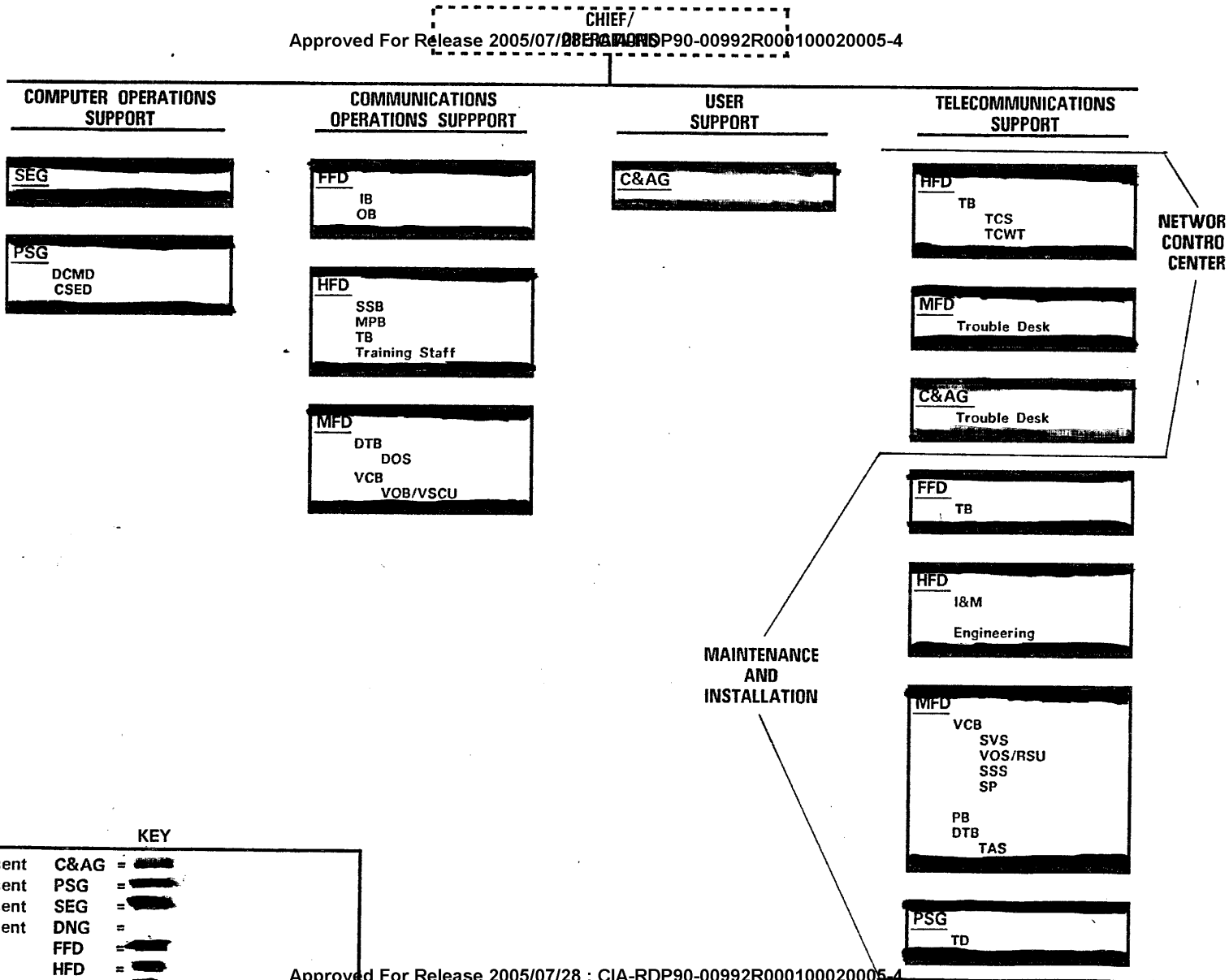
This function must be performed by a senior OIT officer who has and can retain the respect and cooperation of OIT management and the user community. The Architect must be aware of current and evolving technologies and have the vision and ability to interpret those changes into ideas, designs, models, and plans for the future.

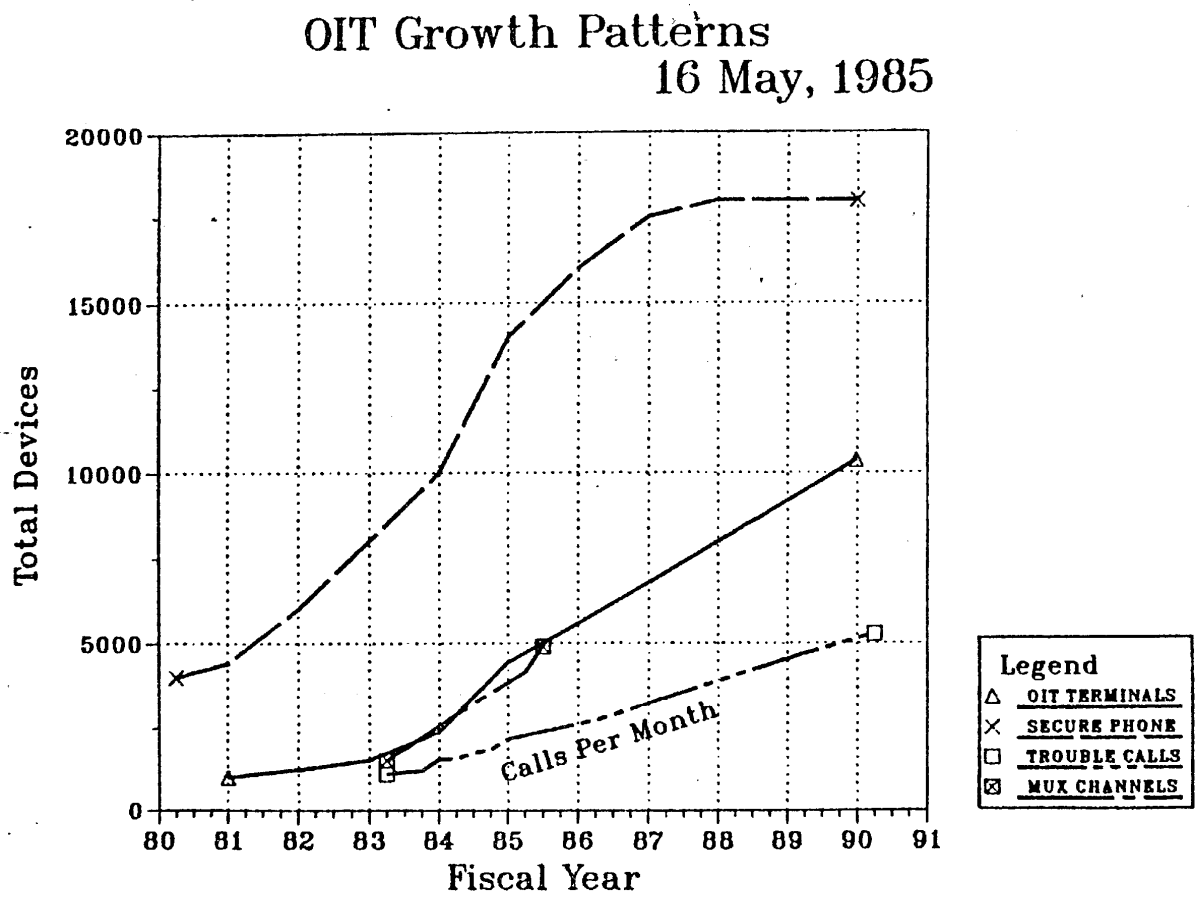
OPERATIONS

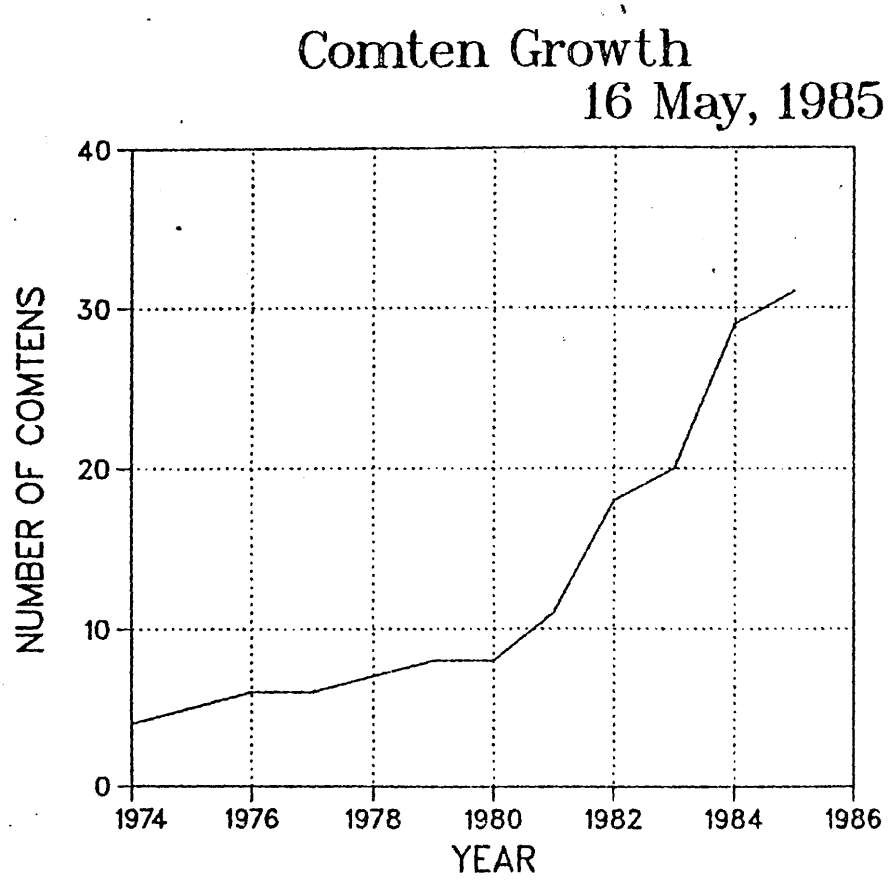
Two operations functions exist today: Computer and Communications. These areas are similar, but each requires a staff with vastly different training and experience. We recommend that these functions remain separate for the present; combining these functions may be counter-productive because of the differences in culture and experiences. Each of these operational components should include the existing support activities required to accomplish their unique objectives. This support includes maintenance programmers and technicians as well as performance/environmental measurement and planning support.

CONCLUSION

Organizational changes will improve communications and provide better focus on our current problem areas. In turn, these changes will make a measurable improvement in our ability to provide requested services. This change should also have a positive impact on communications and coordination among OIT components and with the user community. The organization changes do not, however, eliminate the need for an increase in qualified personnel to perform the problem determination, installation, and maintenance functions; nor do these changes provide the resources (both money and staff) that will allow us to acquire or build the automated tools required to monitor and maintain our complex network.







The OIT Network Control Center
May 20, 1985

The OIT Network Control Center

1. Introduction

The Network Control Center is envisioned as a centralized facility that monitors the OIT network from the host to the terminal. Information on the status of the network is gathered from automated monitoring systems and from technicians working on the network. The Network Control Center is also an information resource for OIT management because it maintains both the current status of the network and an historical record which will be used as a base for statistical reporting. Additionally, this center is a focal point for user trouble calls -- the place where the user can report problems and get results. The Network Control Center can also redirect help calls to the appropriate areas regarding documentation, training, or consulting.

The Network is defined as everything from host applications to the terminal, and the entire voice system. Although the Network Control Center will be established to monitor and track telecommuncations problems, it must be apprised of the situation on the host systems if it is to be a useful information resource.

The nucleus of the Network Control Center currently exists in the DNG Tech Control center. Given the automated tools required, the Network Control Center can be expected to occupy about twice the amount of floor space as Tech Control.

This report will address the responsibilites of the Network Control Center and the resources that it must have -- personnel and monitoring tools -- to carry out these responsibilites. A concept of tri-level support will be discussed, in which the first two levels are in the Network Control Center and the third level is the remainder of OIT.

2. Responsibilities of the Network Control Center

In summary, the Network Control Center will:

- Be the focus for problem reporting.
- Perform first level problem determination.
- Assign problems for resolution.
- Track problems.
- Compile statistics for management reporting.
- Inform users of the network status.
- Monitor security.
- Monitor service level objectives.

3. Staffing

Initial staffing is summarized below.

STAT o [redacted] DNG tech control technicians (an increase of 3)

STAT o [redacted] Watch Officers.

o [redacted] Trouble Desk Operators.

o [redacted] Technical Support Personnel (new positions)

o [redacted] Records Management Personnel (new positions)

o [redacted] Host Support Personnel (from former ODP centers).

These employees will serve on all shifts but coverage of the prime shift will be emphasized. The Network Control Center should be directed by a senior manager (GS-15).

4. Tools

Tools are summarized below. However, this is not meant to be the definitive list of monitoring tools. Of course, the Network Control Center designers will investigate and select the best available tools on the market.

The tools that will be available will be the tools already in place with some additional monitoring capabilities. These include the Tech Control Center, the trouble data bases (which will be connected in a relational fashion and perhaps ultimately combined), the CEMS system (when it is installed), terminal access to the various host centers, and centralized consoles for the COMTENs. In the immediate future, the PABX monitoring equipment and a COMTEN monitoring package will add to the Center's capabilites. Additional tools will be in the form of problem checklists and procedures, phone lists, and configuration data.

5. The Tri-Level Support Concept.

The first level of support is the trouble desk (or help desk). These operators will be knowledgeable to the point of gathering pertinent statistics concerning the problem and asking the users meaningful questions. Since the help desk operators will know the status of the network, they should be able to relay any general status back to the callers. If the caller does have a valid problem, the problem will be logged and will be passed to the second level technicians for investigation. These technicians may be able to resolve the problem operationally -- e.g. requesting a reset of a multiplexor or a line from the proper component -- or will contact the maintenance section that can best handle the problem. The caller can be informed of the status of the problem and the expected time of resolution. The maintenance sections or software technicians and programmers who are not necessarily part of the Network Control Center are the third level of support. Additionally, the monitoring capability of the Netwok Control Center should, in some cases, be able to identify problems before trouble calls arrive.

The user should have to place only one call to first level support. If the problem cannot be immediately resolved, information will flow between the levels of support only. If the problem cannot be fixed immediately, the users will be notified either individually by the first level, or else some type of broadcast message, (e.g., VM message.)

If the problem is one where the user must be involved, the second and third levels of support may contact the user for assistance in solving the problem; however, the first level of support must always be notified so that the problem can be "closed" in the data base. Initial notification to third level personnel defeats the tracking capability -- hunting down a problem that is already known to the Network Control Center involves needless work.

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